Common HTML5 Tags and Structural Elements

Estimated time needed: 25 minutes

Special HTML Elements

In this reading, you will learn about some common HTML5 elements and their purpose. You will also learn about additional elements used for embedding content, which were introduced with HTML5.

Objectives

After completing this reading section, you will be able to:

1. Use common non-HTML5 specific tags
2. Differentiate between HTML5 structural elements including `<section>` and `<article>`
3. Use navigational and grouping elements
4. Use HTML5 elements specific for embedding different types of content

Common HTML Elements - Review

In this section, you will learn more about some common HTML elements and when to use them. You will also go through some examples of their usage for better understanding.

Non HTML5 Specific Tags

Comments

HTML comments are used to include information in your code that is not to be displayed in your browser. This tag provides a way to document your source code and give more information about the code thus, enabling other users to understand the purpose of the code when working on a large database with other developers.

To insert a comment into your code, use the comment tag `<!-- [YOUR COMMENT HERE] -->`, replacing [YOUR COMMENT HERE] with your comment. There are no limitations to what your comment could be, it can be text (both single-line and multi-line) or even other additional HTML tags.

`<div>`

The `<div>` tag defines a division of the page, and is used to group content together. Any type of content can be placed in a div tag, and it is not necessary that it should be semantically related.

`<div>` tags are commonly used when many elements are required to have the same format. Grouping such elements together in the same `<div>` tag enables a developer to easily style them by either using a class or an id.

When using a `<div>` tag, note that browsers will insert a line break before and after the element.

```
<div>
  <h1>This is a heading in a div element</h1>
  <p>This is some text in a div element.</p>
</div>
```

Structural HTML5 Elements

`<section>`

The `<section>` element is used to group content in a more specific way than the `<div>` tag. The content within a `<section>` element is grouped in a semantically meaningful way, that is, there is a reason, other than for styling purposes for putting the content together. Content within a `<section>` tag has a theme, which is usually indicated by a heading tag (e.g. `<h1>`) used immediately after the opening `<section>` tag.

```
<section>
    <h1>Section 1</h1>
    <p>This is text related to section 1.</p>
</section>
<section>
    <h1>Section 2</h1>
    <p>This is some text related to section 2.</p>
</section>
```

`<article>`

An `<article>` element is even more specific than a `<section>`tag. It is used to group together semantically related, self-contained content which can be meaningful on its own. Similar to the `<section>` element, articles usually have headings immediately after their opening tag to indicate what the article is about.

```
<article>
    <h1>Article 1</h1>
    <p>This paragraph is related only to article one and is meaningful on its own, without the rest of the code.</p>
</article>
<article>
    <h1>Article 2</h1>
    <p>This paragraph is related only to article two and is meaningful on its own, without the rest of the code.</p>
</article>
```

`<header>`

The `<header>` element is a container used to define the introductory/header information of a page. It can be used for a navigational bar, or to wrap a table of contents.

An HTML document can contain more than one `<header>` elements, however, they cannot be placed within `<address>`, `<footer>`, or other `<header>` elements.

`<footer>`

A `<footer>` element defines the area at the bottom of the page (known as a footer). This often contains copyright information, contact information, and contact links.

```
<body>
    <article>
        <header>
            <h1>G8 summit protests</h1>
        </header>
        <div>
            <section id="public">
                <h1>Public demonstrations</h1>
                <p>...more...</p>
            </section>
            <section id="control">
                <h1>Crowd control</h1>
                <p>...more...</p>
            </section>
        </div>
        <footer>
            <p>Published today.</p>
        </footer>
    </article>
</body>
```

HTML5 Elements for Grouping

`<aside>`

The `<aside>` element is used to provide additional information that is related to the main discussion. It lets you display further content or additional resources without detracting from the main discussion, and is often placed as a sidebar in a document.

While the `<aside>` element itself is not displayed different from the rest of the content, it is useful for understanding your code and for styling purposes.

```
<p>This is a paragraph of text that casually mentions a concept and continues explaining the main point</p>
<aside>
    <h4>Concept Definition</h4>
    <p>This goes over the concept mentioned in the paragraph to provide readers with further explanation if needed. However, it does not detract
</aside>
```

`<figure>`

The `<figure>` tag defines self-contained content, such as a diagram or photo, that is referred to from the main content. The content within the `<figure>` element should be related to the main content, but still independent in such a way that if removed from the document, it would not affect the flow.

`<figcaption>`

The `<figcaption>` tag defines the caption for the contents of the `<figure>` element. It can be placed as the first or last child element within the `<figure>` element.

```
<figure>
  <img src="images/IDSNlogo.png" width="500" height="500"/>
  <figcaption>IBM Developer Skills Network Logo</figcaption>
</figure>
```

Navigational Elements

<nav>

The <nav> element is used as a way to group navigational elements which are used to move between pages, such as the navigation bar typically found at the top of websites.

The <nav> tag is a convenience tag which does not alter the appearance on webpages. However, it is useful in styling all navigational elements, as well as omitting the content for certain functionalities, such as with screen readers.

```
<nav>
    <div class="menu">
        <a href="#">Home</a> |
        <a href="about.html">About</a> |
        <a href="register.html">Register</a> |
        <a href="#">Sign in</a>
    </div>
</nav>
```

Additional HTML5 Elements

This section will introduce you to new HTML5 elements which are commonly used. This is not a comprehensive list, but is meant to familiarize you with the most common ones.

Embedding Content

<audio>

The <audio> element is used to embed sound content, such as music or podcasts. It contains one or more <source> tags with different audio sources (e.g. MP3, WAV), so the browser can select the first supported source to play.

If a browser does not support the audio formats provided, the browser will instead display any text within the <audio> element.

```
<audio>
  <source src="soundtrack.mp3" type="audio/mpeg">
  <source src="soundtrack.ogg" type="audio/ogg">
  Your browser does not support the audio formats provided.
</audio>
```

<canvas>

The <canvas> element is used to draw graphics via scripting. JavaScript is one way to utilize scripting to draw these graphics, as shown in the example below.

```
<canvas>
    Your browser does not support the canvas tag.
</canvas>
<script>
    var canvas = document.getElementsByTagName("canvas")[0];
    var context = canvas.getContext("2d");
    context.fillRect(0, 0, 100, 100);
</script>
```

If a browser does not support graphical content or JavaScript is disabled, the browser will display any text within the `<canvas>` element.

`<embed>`

The `<embed>` element is used as a container to embed external resources such as media players and plug-in applications into your web page.

```
<embed type="text/html" src="another_webpage.html">
```

`<track>`

The `<track>` element defines text tracks, such as subtitles or captions, for `<audio>` and `<video>` elements. This text should be visible as the related media source it playing, and are formatted in the WebVTT (.vtt) format.

```
<video>
  <source src="common_html_elements.mp4" type="video/mp4">
  <track src="english_subtitles.vtt" kind="subtitles" srclang="en" label="English">
  <track src="spanish_subtitles.vtt" kind="subtitles" srclang="es" label="Spanish">
</video>
```

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